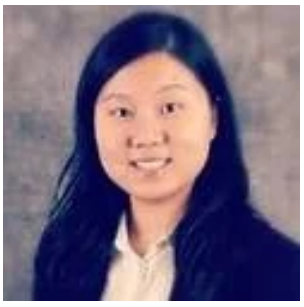

Contact

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Jie Gao

Associate Professor of Mechanical Engineering; Associate Investigator, Intelligent Systems Center
Associate Professor of Mechanical Engineering, Mechanical and Aerospace Engineering

Email
gaojie@mst.edu

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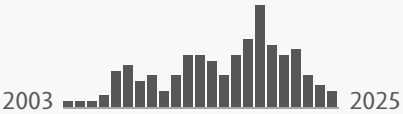

Research activity per year

Overview Fingerprint Network **Scholarly Works** (164) Press/Media (8)

Similar Profiles (6)

Research output

Research output per year

149
Article

13
Conference contribution

1
Conference article

1
Review article

50 - 100 out of 164 results | Publication Year, Title (descending) ›

2019

Chiral Grayscale Imaging with Plasmonic Metasurfaces of Stepped Nanoapertures

Chen, Y., Gao, J. & Yang, X., Mar 1 2019, In: Advanced Optical Materials. 7, 6, 1801467.

Research output: Contribution to journal › Article › peer-review

Grayscale Imaging | Metamaterial | Pixel Depth | Image Encryption | Imaging Approach

Enhanced Quantum Dots Spontaneous Emission with Metamaterial Perfect Absorbers

Wang, W., Yang, X., Luk, T. S. & Gao, J., Jan 1 2019, In: Applied Physics Letters. 114, 2, 021103.

Research output: Contribution to journal › Article › peer-review

Open Access | File

Metamaterial Perfect Absorber | Quantum Dot | Spontaneous Emission | Metamaterial | Photoluminescence

Generation of Nondiffracting Vector Beams with Ring-Shaped Plasmonic Metasurfaces

Zhang, Y., Yang, X. & Gao, J., Jun 1 2019, In: Physical Review Applied. 11, 6, 064059.

Research output: Contribution to journal › Article › peer-review

Open Access | File

Non-Diffracting | Optical Information Processing | Stokes Parameters | Opaque Obstacle | Multi-Beam Interference

Generation of Polarization Singularities with Geometric Metasurfaces

Zhang, Y., Yang, X. & Gao, J., Dec 1 2019, In: Scientific Reports. 9, 1, 19656.

Research output: Contribution to journal › Article › peer-review

Open Access File

Singularities | Metasurface | Polarization Singularity | Potential Application | Superposition

Manipulating Transverse Photovoltage Across Plasmonic Triangle Holes of Symmetry Breaking

Akbari, M., Gao, J. & Yang, X., Apr 1 2019, In: Applied Physics Letters. 114, 17, 171102.

Research output: Contribution to journal › Article › peer-review

Open Access File

Photovoltage | Plasmonics | Broken Symmetry | Circular Polarization | Right Triangle

Measurement and Simulation Study on Effective Drainage Radius of Borehole Along Coal Seam

Qin, W., Xu, J., Hu, G., Gao, J. & Xu, G., Nov 1 2019, In: Energy Exploration and Exploitation. 37

Research output: Contribution to journal › Article › peer-review

Open Access File

Coal Seam | Measurement Study | Effective Drainage Radius | Borehole | Coal Mass

Nonlinear Conversion of Orbital Angular Momentum in Tungsten Disulfide Monolayer

Dasgupta, A., Yang, X. & Gao, J., Nov 1 2019, In: Journal of Optics (United Kingdom). 21, 12, 125404.

Research output: Contribution to journal › Article › peer-review

Nonlinear Conversion | Tungsten Disulfide Monolayer | Monolayers | Tungsten | Vortex

Optical Transportation and Accumulation of Microparticles by Self-Accelerating Cusp Beams

Liu, W., Yang, X. & Gao, J., Apr 1 2019, In: Physical Review A. 99, 4, 043839.

Research output: Contribution to journal › Article › peer-review

Open Access File

Optical Transportation | Self-Acceleration | Microparticles | Microparticle | Bend Channel

Optical Vortex Transmutation with Geometric Metasurfaces of Rotational Symmetry Breaking

Zhang, Y., Gao, J. & Yang, X., Nov 18 2019, In: Advanced Optical Materials. 7, 22, 1901152.

Research output: Contribution to journal › Article › peer-review

Broken Symmetry | Metasurface | Optical Vortex | Rotational Symmetry Breaking | Far Field

Orbital Angular Momentum Transformation of Optical Vortex with Aluminum Metasurfaces

Zhang, Y., Yang, X. & Gao, J., Dec 1 2019, In: Scientific Reports. 9, 1, 9133.

Research output: Contribution to journal › Article › peer-review

Open Access File

Angular Momentum | Metasurface | Optical Vortex | Momentum Transformation | Dynamic Distribution

Scaling Law of Purcell Factor in Hyperbolic Metamaterial Cavities with Dipole Excitation

Wang, W., Yang, X. & Gao, J., Feb 1 2019, In: Optics Letters. 44, 3, p. 471-474 4 p.

Research output: Contribution to journal › Article › peer-review

Scaling Law | Dipole Excitation | Metamaterial | Resonant Cavity | Fundamental Mode

Second-Harmonic Optical Vortex Conversion from WS_2 Monolayer

Dasgupta, A., Gao, J. & Yang, X., Dec 1 2019, In: Scientific Reports. 9, 1, 8780.

Research output: Contribution to journal › Article › peer-review

Open Access File

Harmonics | Angular Momentum | Optical Vortex | Optical Communication | Optical Selection Rules

Spatial Variation of Vector Vortex Beams with Plasmonic Metasurfaces

Zhang, Y., Gao, J. & Yang, X., Dec 1 2019, In: Scientific Reports. 9, 1, 9969.

Research output: Contribution to journal › Article › peer-review

Open Access File

Vector Vortex Beam | Plasmonic Metasurfaces | Angular Momentum | Metasurface | Beam Propagation

Spontaneous Emission Rate Enhancement with Aperiodic Thue-Morse Multilayer

Li, L., Mathai, C. J., Gangopadhyay, S., Yang, X. & Gao, J., Dec 1 2019, In: Scientific Reports. 9, 1, 8473.

Research output: Contribution to journal › Article › peer-review

Open Access File

Rate Enhancement | Thue-Morse | Lattice Order | Hyperbolic Dispersion | Metamaterial

Strong Circular Dichroism in Chiral Plasmonic Metasurfaces Optimized by Micro-Genetic Algorithm

Li, Z., Rosenmann, D., Czaplewski, D. A., Yang, X. & Gao, J., Sep 1 2019, In: Optics Express. 27, 20, p. 28313-28323 11 p.

Research output: Contribution to journal › Article › peer-review

Open Access File

Circular Dichroism | Nanostructure | Nanomaterial | Phase Delay | Parameter Modification

Topological Charge Inversion of Optical Vortex with Geometric Metasurfaces

Zhang, Y., Gao, J. & Yang, X., Apr 1 2019, In: Advanced Optical Materials. 7, 8, 1801486.
Research output: Contribution to journal › Article › peer-review

Angular Momentum | Metasurface | Optical Vortex | Topological Charge | Charge Inversion

2018

Chiral Metamaterials of Plasmonic Slanted Nanoapertures with Symmetry Breaking

Chen, Y., Gao, J. & Yang, X., Jan 1 2018, In: Nano Letters. 18, 1, p. 520-527 8 p.
Research output: Contribution to journal › Article › peer-review

Plasmonics | Chiral Metamaterial | Broken Symmetry | Metamaterial | Metal Layer

Direction-Controlled Bifunctional Metasurface Polarizers

Chen, Y., Gao, J. & Yang, X., Dec 1 2018, In: Laser and Photonics Reviews. 12, 12, 1800198.
Research output: Contribution to journal › Article › peer-review

Metasurface | Bifunctional Metasurface | Polarizer | Phase State | Chiral Imaging

Generating Focused 3D Perfect Vortex Beams by Plasmonic Metasurfaces

Zhang, Y., Liu, W., Gao, J. & Yang, X., Feb 1 2018, In: Advanced Optical Materials. 6, 4, 1701228.
Research output: Contribution to journal › Article › peer-review

Metasurface | Perfect Vortex Beam | Optical Device | Photonics | Quantum Optics

Generation of Three-Dimensional Optical Cusp Beams with Ultrathin Metasurfaces

Liu, W., Zhang, Y., Gao, J. & Yang, X., Jun 1 2018, In: Scientific Reports. 8, 1, 9493.
Research output: Contribution to journal › Article › peer-review

Open Access | File

Ultrathin Metasurface | Metasurface | Optical Device | Field Structure | Broadband Wavelength

Generation of Transverse Photo-Induced Voltage in Plasmonic Metasurfaces of Triangle Holes

Akbari, M., Gao, J. & Yang, X., Aug 1 2018, In: Optics Express. 26, 16, p. 21194-21203 10 p.
Research output: Contribution to journal › Article › peer-review

Open Access | File

Metasurface | Metamaterial | Maxwell Stress Tensor | Right-Hand Circular Polarization | Acting Forces

Gold Nanoparticle Chains: Synthesis, Characterization, and Modeling Using Spectroscopic Ellipsometry

Vieaud, J., Gao, J., Cane, J., Stchakovsky, M., En Naciri, A., Ariga, K., Oda, R., Pouget, E. & Battie, Y., Jun 7 2018, In: Journal of Physical Chemistry C. 122, 22, p. 11973-11984 12 p.
Research output: Contribution to journal › Article › peer-review

Open Access

Gold Nanoparticle Chains | Point Dipole | Dipole Method | Nanoparticle | Gold Nanoparticles

Near-Infrared Chiral Plasmonic Metasurface Absorbers

Ouyang, L., Wang, W., Rosenmann, D., Czaplewski, D. A., Gao, J. & Yang, X., Nov 1 2018, In: Optics Express. 26, 24, p. 31484-31489 6 p.
Research output: Contribution to journal › Article › peer-review

Open Access File

Near Infrared | Metasurface | Chiral Plasmonics | Chirality | Natural Material

Optical Transportation of Micro-Particles by Non-Diffracting Weber Beams

Liu, W., Gao, J. & Yang, X., Nov 1 2018, In: Journal of Optics (United Kingdom). 20, 12, 125401.
Research output: Contribution to journal › Article › peer-review

7

Weber Beams | Polystyrene | Main Lobe | Particle Motion | Optical Tweezer

Spin-Controlled Wavefront Shaping with Plasmonic Chiral Geometric Metasurfaces

Chen, Y., Yang, X. & Gao, J., Dec 1 2018, In: Light: Science and Applications. 7, 1, 84.
Research output: Contribution to journal › Article › peer-review

2

Open Access File

Enantiomer | Cross Polarization | Metamaterial | Plasmonics | Metasurface

Spin-Selective Second-Harmonic Vortex Beam Generation with Babinet-Inverted Plasmonic Metasurfaces

Chen, Y., Yang, X. & Gao, J., Oct 1 2018, In: Advanced Optical Materials. 6, 19, 1800646.
Research output: Contribution to journal › Article › peer-review

Spin Selectivity | Vortex Beam Generation | Vortex | Plasmonics | Metasurface

Twisting Phase and Intensity of Light with Plasmonic Metasurfaces

Zhang, Y., Yang, X. & Gao, J., Mar 1 2018, In: Scientific Reports. 8, 1, 4884.
Research output: Contribution to journal › Article › peer-review

Open Access | File

Twist Phase | Twisted Beam | Metasurface | Ultra-Compact | Focal Plane

Ultra-Broadband Infrared Absorption by Tapered Hyperbolic Multilayer Waveguides

Deng, H., Mathai, C. J., Gangopadhyay, S., Gao, J. & Yang, X., Mar 1 2018, In: Optics Express. 26, 5, p. 6360-6370 11 p.
Research output: Contribution to journal › Article › peer-review

Open Access | File

Multilayer Waveguide | Ultra-Broadband | Waveguide | Infrared Absorption | Light Mode

Wavelength-Selective Mid-Infrared Metamaterial Absorbers with Multiple Tungsten Cross Resonators

Li, Z., Stan, L., Czaplewski, D. A., Yang, X. & Gao, J., Mar 1 2018, In: Optics Express. 26, 5, p. 5616-5631 16 p.
Research output: Contribution to journal › Article › peer-review

Open Access | File

Resonator | Tungsten | Metamaterial | Cross-Shaped Resonator | Metamaterial Absorber

2017

Broadband Infrared Absorbers with Stacked Double Chromium Ring Resonators

Deng, H., Stan, L., Czaplewski, D., Gao, J. & Yang, X., Nov 1 2017, In: Optics Express. 25, 23, p. 28295-28304 10 p.

Research output: Contribution to journal › Article › peer-review

Open Access File

Resonator | Chromium | Broadband Absorber | Heat Generation | Thermal Analysis

Broadband Polarization Conversion with Anisotropic Plasmonic Metasurfaces

Cao, W., Yang, X. & Gao, J., Aug 1 2017, In: Scientific Reports. 7, 1, 8841.

Research output: Contribution to journal › Article › peer-review

Open Access File

Vortex | Antenna | Metasurface | Linear Polarization | Light Control

Enhanced Quantum Dot Spontaneous Emission with Multilayer Metamaterial Nanostructures

Li, L., Wang, W., Luk, T. S., Yang, X. & Gao, J., Mar 1 2017, In: ACS Photonics. 4, 3, p. 501-508 8 p.

Research output: Contribution to journal › Article › peer-review

Quantum Dot | Spontaneous Emission | Metamaterial | Nanomaterial | Nanostructure

GoldHelix: Gold Nanoparticles Forming 3D Helical Superstructures with Controlled Morphology and Strong Chiroptical Property

Cheng, J., Le Saux, G., Gao, J., Buffeteau, T., Battie, Y., Barois, P., Ponsinet, V., Delville, M. H., Ersen, O., Pouget, E. & Oda, R., Apr 25

2017, In: ACS nano. 11, 4, p. 3806-3818 13 p.
Research output: Contribution to journal › Article › peer-review

Open Access

Superlattice | Gold Nanoparticles | Helical Superstructures | Nanoparticle | Silicon Dioxide

Klein Tunneling near the Dirac Points in Metal-Dielectric Multilayer Metamaterials

Sun, L., Gao, J. & Yang, X., Aug 1 2017, In: Scientific Reports. 7, 1, 9678.
Research output: Contribution to journal › Article › peer-review

Open Access File

Metamaterial | Dielectric Material | Beam Refraction

Metasurface Holograms for Holographic Imaging

Wan, W., Gao, J. & Yang, X., Nov 1 2017, In: Advanced Optical Materials. 5, 21, 1700541.
Research output: Contribution to journal › Article › peer-review

Design Principle | Metamaterial | Optical Imaging Technique | Holograms | Metasurface

Realizing Structural Color Generation with Aluminum Plasmonic V-Groove Metasurfaces

Wang, W., Rosenmann, D., Czaplewski, D., Yang, X. & Gao, J., Aug 1 2017, In: Optics Express. 25, 17, p. 20454-20465 12 p.
Research output: Contribution to journal › Article › peer-review

Open Access File

Aluminum | Groove Arrays | Surface (Surface Science) | Groove Depth | Dark-Field Illumination

Self-Assembly of Heterogeneously Shaped Nanoparticles into Plasmonic Metamolecules on

DNA Origami

Liu, W., Li, L., Yang, S., Gao, J. & Wang, R., Oct 1 2017, In: Chemistry - A European Journal. 23, 57, p. 14177-14181 5 p.
Research output: Contribution to journal › Article › peer-review

Plasmonic Metamolecule | Shaped Nanoparticles | Nanoparticle | Self Assembly | Advanced Material

Spiraling Light with Magnetic Metamaterial Quarter-Wave Turbines

Zeng, J., Luk, T. S., Gao, J. & Yang, X., Sep 1 2017, In: Scientific Reports. 7, 1, 11824.
Research output: Contribution to journal › Article › peer-review

Open Access | File

Metamaterial | Angular Momentum | Linear Polarization | Nanomaterial | Holography

Structured Light Generation by Magnetic Metamaterial Half-Wave Plates at Visible Wavelength

Zeng, J., Luk, T. S., Gao, J. & Yang, X., Dec 1 2017, In: Journal of Optics. 19, 12, 125103.
Research output: Contribution to journal › Article › peer-review

Metamaterial | Metasurface | Grating Pattern | Light Beams | Holography

2016

All-Metal Structural Color Printing Based on Aluminum Plasmonic Metasurfaces

Li, Z., Wang, W., Rosenmann, D., Czaplewski, D., Yang, X. & Gao, J., Sep 1 2016, In: Optics Express. 24, 18, p. 20472-20480 9 p.
Research output: Contribution to journal › Article › peer-review

Open Access | File

Aluminum | Surface (Surface Science) | Disk Array | Visible Color | Etching Depth

Analysis of Nonlocal Effective Permittivity and Permeability in Symmetric Metal-Dielectric Multilayer Metamaterials

Sun, L., Yang, X. & Gao, J., Jun 1 2016, In: Journal of Optics. 18, 6, 065101.

Research output: Contribution to journal › Article › peer-review

Permittivity | Metamaterial | Dielectric Material | Permeability Tensor | Optical Field Distribution

Full-Color Plasmonic Metasurface Holograms

Wan, W., Gao, J. & Yang, X., Dec 1 2016, In: ACS Nano. 10, 12, p. 10671-10680 10 p.

Research output: Contribution to journal › Article › peer-review

Phase Modulation | Holographic Applications | Secondary Color | Optical Metasurfaces | Three-Primary-Color

Generating and Separating Twisted Light by Gradient-Rotation Split-Ring Antenna Metasurfaces

Zeng, J., Li, L., Yang, X. & Gao, J., May 1 2016, In: Nano Letters. 16, 5, p. 3101-3108 8 p.

Research output: Contribution to journal › Article › peer-review

Vortex Generator | Vortex Modes | Mode Purity | Limited Operation | Structured Light Beams

Optical Nonlocality Induced Zitterbewegung near the Dirac Point in Metal-Dielectric Multilayer Metamaterials

Sun, L., Gao, J. & Yang, X., Apr 1 2016, In: Optics Express. 24, 7, p. 7055-7062 8 p.
Research output: Contribution to journal › Article › peer-review

Open Access File

Metamaterial | Dielectric Material | Permittivity | Surface Plasmon | Dispersion Relation Analysis

Strong Coupling between Mid-Infrared Localized Plasmons and Phonons

Wan, W., Yang, X. & Gao, J., May 1 2016, In: Optics Express. 24, 11, p. 12367-12374 8 p.
Research output: Contribution to journal › Article › peer-review

Open Access File

Plasmonic Metamaterials | Optical Power | Surface Plasmon Resonance | Plasmon | Phonon

2015

Aluminum Plasmonic Metamaterials for Structural Color Printing

Cheng, F., Gao, J., Stan, L., Rosenmann, D., Czaplewski, D. & Yang, X., Jun 1 2015, In: Optics Express. 23, 11, p. 14552-14560 9 p.
Research output: Contribution to journal › Article › peer-review

Open Access File

Aluminum | Plasmonic Metamaterials | Metamaterial | Color Printing | High Color Purity

Broadband Perfect Absorber Based on One Ultrathin Layer of Refractory Metal

Deng, H., Li, Z., Stan, L., Rosenmann, D., Czaplewski, D., Gao, J. & Yang, X., Jun 1 2015, In: Optics Letters. 40, 11, p. 2592-2595 4 p.
Research output: Contribution to journal › Article › peer-review

Permittivity | Chromium | Refractory Metal

Silicon Dioxide | Ultra-Broadband Perfect Absorption

Diffraction-Free Optical Beam Propagation with Near-Zero Phase Variation in Extremely Anisotropic Metamaterials

Sun, L., Yang, X., Wang, W. & Gao, J., Mar 1 2015, In: Journal of Optics. 17, 3, 035101.

Research output: Contribution to journal › Article › peer-review

Metamaterial | Beam Propagation | Permittivity

Transfer-Matrix Method | Dielectric Material

Enhanced Structural Color Generation in Aluminum Metamaterials Coated with a Thin Polymer Layer

Cheng, F., Yang, X., Rosenmann, D., Stan, L., Czaplewski, D. & Gao, J., Sep 1 2015, In: Optics Express. 23, 19, p. 25329-25339 11 p.

Research output: Contribution to journal › Article › peer-review

Open Access | File

Color Performance | Strong Light Absorption | Pure Color

Transparent Polymer | Triple-Layer

Nonlocal Effective Medium Analysis in Symmetric Metal-Dielectric Multilayer Metamaterials

Sun, L., Li, Z., Luk, T. S., Yang, X. & Gao, J., May 1 2015, In: Physical Review B: Condensed Matter and Materials Physics. 91, 19, 195147.

Research output: Contribution to journal › Article › peer-review

Metamaterial | Dielectric Material | Permittivity

Polariton | Transfer-Matrix Method

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